Pandemic Influenza: Where Do We Go From Here

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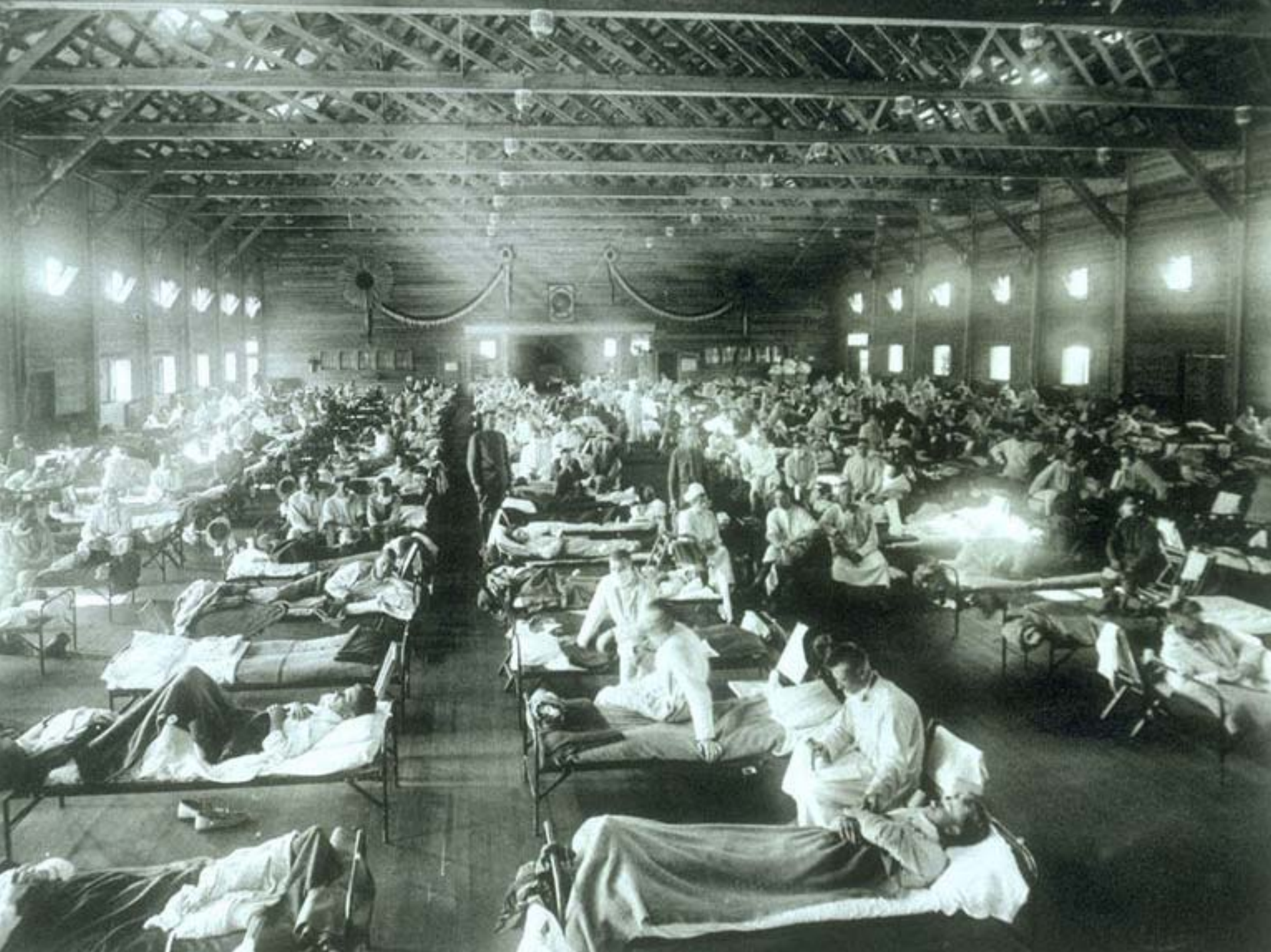
“Although exactly when and where the next influenza virus will emerge is not known, it is likely that the outcome will vary from serious to catastrophic…”

Pandemic Influenza Preparedness and Response Plan, Department of Health and Human Services

April, 2006



Influenza

- "Flu season" happens every year: Seasonal influenza
- Respiratory disease, spread mainly by respiratory droplets
- Once infected, immune from that strain
- People infected with influenza A and B: annual flu vaccine provides protection for 2 strains of influenza A and influenza B

Influenza

- Only influenza A causes pandemics or global epidemics
- Influenza A identified by 2 surface proteins required for viral infection of cells and release from cells: hemagglutinin (H) and neuraminidase (N)
- Influenza A virus keeps changing, in drifts and shifts
- Drift – small change flu A, occurs on ongoing basis; reason for different flu vaccine each year
- Shift – flu A - sudden change, new virus, no one immune – may cause pandemic

Influenza Pandemics

- Worldwide epidemic of influenza
  - New subtype after antigenic shift
  - Ability to infect humans
  - Sustained person-to-person transmission
- Pandemics: 1918, 1957, 1968
  - 1918: H1N1, most severe with 20-50 million deaths
  - 1957: H2N2
  - 1968: H3N2
- Pandemic scares: 1976, 1997, 1999
  - 2005?

H5N1 Asian Epizootic: Avian flu

- Highly Pathogenic Avian Influenza (HPAI)
- Dec 2003 to present
  - Poultry outbreaks in numerous countries in Asia, Indonesia, Europe, Middle East and Africa – millions of birds culled
  - 191 human cases in 9 countries (as of April 4, 2006): 108 deaths (>50% mortality)
- Historically unprecedented
  - Geographical scope
  - Economic consequences

H5N1

- Outbreak in birds: many countries, 3 continents
- No human pandemic at this time
- Criteria for pandemic:
  - √ Novel strain that is not recognized by the human immune system
  - √ Causes increased sickness and death
  - X Sustained person-to-person transmission
- Concern that virus will change to increase person-to-person transmission

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Unique Features of Pandemic Flu

- Multiple areas affected at the same time
  - More difficult to shift resources
- Could go on for months in a community, with 2-3 different waves over 18-24 mo
- Healthcare workers will be affected
- Preventive and therapeutic agents delayed and in short supply
  - New vaccine must be made for the pandemic virus
- Widespread illness would impact essential services

Issue: Vaccine

- Several supply stages:
  - No vaccine available for 4-6 months- Community control measures important
  - Limited vaccine supply when initially available
    - Doses released in batches
    - Focus on vaccine priority groups
  - Adequate vaccine supply eventually – Expand use
- Priorities may shift as supply increases

Issue: Antivirals

- Good news: Can be used for prophylaxis (prevention) and for treatment (to reduce illness duration and severity)
- Bad news:
  - Only one type effective against H5N1
  - Supplies are very limited, drugs relatively expensive
  - Virus could develop resistance
- Need to establish priority groups, determine whether to use for treatment only or allow for prophylaxis
  - Consider impact on absenteeism

Issue: Medical Care

- Access to and provision of healthcare is critical to reduce morbidity/mortality
- Surge planning
  - Great demand for beds, intensive care, ventilators, other supplies (lab, PPE)
  - Impact of staff absenteeism
- Risk of nosocomial (hospital) outbreaks of influenza
- Issues regarding management of fatalities

Virginia Pandemic Flu Summit: March 23, 2006

- Increased awareness statewide
- Importance emphasized by concern and statements of Secretary Leavitt and Governor Kaine
- Breakout sessions offered opportunity for everyone to have input, voice concerns, raise issues

Virginia Pandemic Flu Summit: Follow-up

- Breakout Sessions
  - Facilitators have submitted their reports
  - Reports available on-line in mid-April
- Continuing to revise state plan with input from Advisory Committee members, others
- Engage VDEM and OCP at the state level to address non-health pandemic planning
- Focus now on local planning as well as implementation of federal and state recommendations

Beyond the Virginia Pandemic Influenza Summit

- Pandemic flu planning should be extension of local emergency planning for all hazards
- Engage local government leaders and emergency managers who are ultimately responsible for assuring safety of population and providing resources for community
- Local plan is a community plan, not a LHD plan
- Encourage regional planning as well as local planning

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Beyond the Virginia Pandemic Influenza Summit

- Assure involvement of all aspects of healthcare community:
  - Hospitals,
  - Outpatient treatment centers,
  - Long-term care facilities
  - Homecare
  - Physicians, pharmacists, nurses, other providers
  - Mental health providers

Beyond the Virginia Pandemic Influenza Summit

- Include involvement of:
  - Schools
  - Colleges and universities
  - First responders – fire, EMS
  - Law enforcement
  - Business community
  - Media
  - Assisted living and other social services programs
  - Volunteer, non-profit groups
  - Faith community

Surge Planning

- Medical/healthcare surge – healthcare facilities, providers; extension of overall surge planning
- Address special needs populations
  - Medically fragile
  - Non-English speaking, deaf, blind communities
  - Community Services Boards, mental health facilities for those with mental illness
  - Enlist social services to address other special needs groups: homebound requiring food, sheltering, other support services

Volunteer Planning

- Coordinate activities
  - Medical Reserve Corps
  - Citizen Corps
  - American Red Cross
  - Faith communities, churches
- Determine specific roles of different volunteer groups during pandemic

Distribution of Limited Resources

- Includes: anti-virals, vaccines, medical equipment (ventilators), supplies (masks, other PPE)
- Issues related to priority access to anti-virals and vaccine still foremost
- Important to have these discussions so decisions are as transparent as possible

Assure Continuation of Essential Services

- Define essential services
- Identify essential personnel
- Incorporate into Continuity of Operations/Continuity of Government planning – plan for absence of 20-40% of workforce at any one time
- Discuss methods of maintaining essential services while limiting risk of disease: increased use of distance technology

Role of Isolation and Quarantine: Need for Further Discussion

- Isolation of ill persons, to prevent spread of disease
- Quarantine: separation of people exposed but not ill
  - Most useful early to limit geographic spread
  - Very limited, if any, value during pandemic when virus has spread widely
- Role of social distancing: limit/cancel large gatherings, school closing

Issue: Community Transmission

- Options
  - School closures
  - Recommendations about telecommuting
  - "Snow days"
  - Isolation/quarantine early in the pandemic (when to stop implementing?)
  - Discouraging/banning large gatherings (indoor/outdoor)
- Benefits and impact uncertain

Risk Communication

- Essential at all stages, beginning before pandemic spread
- Constantly changing situation and messages must be relayed to public in appropriate and timely manner
- Recommendations will change over time
- Effective response to pandemic requires public support – decisions will not be easy but must be perceived as fair and balanced

Federal Pan Flu Funding

- Proposal being developed now for $2.29 million initial funding for Virginia, to be obligated by Aug 31, 2006
- Most being distributed to Districts for local assessments and planning efforts
- Regional collaboration and planning encouraged
- Additional funding available after Aug 31, 2006; amount allocated for Virginia of $250 million for states not known

Federal Role in Planning

- Set general guidelines and criteria
- Provide federal stockpile of medications, supplies
- Support enhanced supply of antivirals
- Enhance vaccine production and support new vaccine production techniques
- Support laboratory identification procedures

State Roles in Planning

- Public information and education
- Broad agency involvement in planning
- Assuring surge capacity of the healthcare and public health communities
- Establish community control and infection control guidelines, policies for stockpiling of antivirals, guidelines for allocation of vaccine and antivirals (specific priority categories)
- Isolation/quarantine guidelines and decisions
- Laboratory testing

Local Roles in Planning

- Public information and education
- Community involvement and ownership of community plans – not just LHD plans
- Assuring surge capacity of the healthcare and public health communities
- Many decisions on community control, stockpiling of antivirals, specific allocation of vaccine and antivirals (numbers of people and identification of people in specific categories) made at local levels

Exercises

- Tabletop in summer, 2006
- Full exercise in late October, 2006
- Include partners in exercise, at both state and local levels
- Invitation to partners in NCR to participate

Summary

- Many complex issues
- Pandemic will happen sometime
  - Could occur soon or in distant future
  - With H5N1 or another strain of influenza A
- We don't now know exactly which control measures will control spread: for which populations, at what times, in what areas
- Planning and discussions must occur at the local level, with effective public education